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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/697,650	10/31/2003	Shinichi Abe	61282-044	8479

7590 03/21/2006

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Washington, DC 20005-3096

EXAMINER
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MISIURA, BRIAN THOMAS

ART UNIT	PAPER NUMBER
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2112

DATE MAILED: 03/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/697,650	ABE, SHINICHI	
	<b>Examiner</b>	<b>Art Unit</b>	
	Brian T. Misiura	2112	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3,4,7 and 8 is/are allowed.
- 6) ☒ Claim(s) 1,2,5 and 6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>10/31/2003</u>  | 6) <input type="checkbox"/> Other: _____                                    |

### **Detailed Action**

#### ***Drawings***

Figure 5 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Art Unit: 2112

Claims 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamamoto, U.S. Patent No. 6,209,105 in view of Barstow, U.S. Patent No. 5,448,630, in further view of Sato, U.S. Patent No. 6,192,425.

Per claims 1 and 5, Hamamoto discloses: a semiconductor integrated circuit for outputting an OR output of an external interrupt factor and an internal interrupt factor as an interrupt request signal to an outside (figure 5, signal "WAKEUP" represents the external interrupt, and "CRHOLDH8" represents the internal interrupt).

Hamamoto does not disclose the bypassing resistor.

However, Barstow discloses a resistor unit for bypassing an output end of the interrupt request signal to an input end of the external interrupt factor (Barstow, column 7 line 59 – column 8 line 2, figure 6).

Neither Hamamoto nor Barstow discloses the tri-state buffer means.

However, Sato discloses control means for controlling the output end of the interrupt request signal to high impedance when an internal power source is shut-off (Sato, column 6 lines 1-8, figure 3).

- It would have been obvious to one having ordinary skill in the art at the time of the applicant's claimed invention to incorporate the teachings of Barstow and Sato into the system of Hamamoto in order to provide methods for notifying a CPU of interrupts even when the system has been powered down.

Claims 2 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamamoto, U.S. Patent No. 6,209,105 in view Unnewehr, U.S. Patent No. 4,594,632.

Per claims 2 and 6, Hamamoto discloses: a semiconductor integrated circuit for outputting an OR output of an external interrupt factor and an internal interrupt factor as an interrupt request signal to an outside (figure 5, signal "WAKEUP" represents the external interrupt, and "CRHOLDH8" represents the internal interrupt), comprising:

Hamamoto does not disclose: the rectifying unit.

However, Unnewehr discloses: at least one rectifying unit for bypassing an output end of the interrupt request signal and at least one of input ends of the external interrupt factor to each other in an I/O power source section in which supply of a power is continuously carried out also after an internal power source is shut-off (Unnewehr, column 1 line 60 – column 2 line 12).

- It would have been obvious to one having ordinary skill in the art at the time of the applicant's claimed invention to incorporate the teachings of Unnewehr into the system of Hamamoto in order to provide methods for notifying a CPU of interrupts even when the system has been powered down.

***Allowable Subject Matter***


Claims 3, 4, 7, and 8 are allowed. The following is an examiners reason for the indication of allowable subject matter: independent claims 3, 4, 7, 8 all include limitations claiming: "a switching means for bypassing an output end of an interrupt request signal to an input end of an external interrupt factor by a switching operation for responding to an external control signal" and "control means for controlling the output end of the interrupt request signal to a high impedance when the (internal power source is shut off / external control signal is supplied)". The combinations of these limitations could not be found in the prior art and would not have been obvious to combine.


***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian T. Misiura whose telephone number is (571) 272-0889. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rehana Perveen can be reached on (571)272-3676. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
3/15/2006

  
REHANA PERVEEN  
SUPERVISORY PATENT EXAMINER  
3/16/06